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IS : 5714 - 1981

(Reaffirmed 2007)

(Reaffirmed 2002)

Indian Standard

SPECIFICATION FOR HYDRANT STAND-PIPE FOR FIRE FIGHTING

(First Revision)

UDC 614·843·1

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SPECIFICATION FOR HYDRANT STAND-PIPE FOR FIRE FIGHTING

(First Revision)

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(*Continued on page* 2)

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(*Continued on page* 9)

Indian Standard

SPECIFICATION FOR HYDRANT STAND-PIPE FOR FIRE FIGHTING

(First Revision)

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 31 September 1981, after the draft finalized by the Fire Fighting Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 The pump is connected to an underground fire-hydrant by means of a hydrant stand-pipe. This enables the hydrant to be connected to the pump either through its normal suction hose or through one or more delivery hoses.

0.3 This standard was first published in 1970 and covered the provision of connecting stand-pipe with underground hydrant by screw threads or instantaneous female coupling. The latter was done so as to allow for the transition period for changing over to the standard type of the outlet. This revision has been prepared so as to provide complete details of the equipment with the standard inlet, which could fit to the underground hydrant as per IS : 909-1975*. In this revision, the integral type has been retained for the time being, as the detachable types covered in the earlier version are at present not used by the fire brigades.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960†. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard lays down the requirements regarding material, shape and dimensions, construction, workmanship and finish, and performance test for hydrant stand-pipe.

---

*Specification for underground fire hydrant, sluice valve type (*second revision*).

†Rules for rounding off numerical values (*revised*).

2. DESCRIPTION

2.1 The stand-pipe shall consist of the following components:

a) Base,
b) Shaft with fittings,
c) Head consisting of bend, and
d) Instantaneous female outlet(s) with blank cap(s).

3. MATERIALS

3.0 The stand-pipe head may be made either of leaded-tin-bronze or aluminium alloy. The stand-pipe may also be made either completely out of aluminium alloy with shaft of aluminium pipe or mild steel pipe (galvanized) with leaded-tin-bronze fittings. While selecting the material for the manufacture of stand-pipes, care shall be taken to avoid juxtaposition of dissimilar metals likely to cause electrolytic action.

3.1 Leaded-Tin-Bronze — Leaded-tin-bronze used for castings and forgings shall confom to Grade II of IS : 318-1962*.

3.2 Aluminium Alloy — Aluminium alloy used for castings and forgings shall conform to IS Designation on 4 450 of IS : 617-1975†.

3.3 Mild Steel Pipes (Galvanized) — Mild steel pipes (galvanized), if used for the stand-pipe shaft, shall conform to IS : 1239 (Part I)-1979‡.

3.4 Aluminium Pipe — Aluminium pipe, if used for the stand-type shaft, shall conform to IS : 737-1974§.

3.5 Washers

3.5.1 Where rubber is used for washer, it shall conform to the requirements in respect of hardness, tensile strength and elongation at break before and after ageing as mentioned for Type 1A of IS : 5382-1969||.

3.5.2 Where leather is used, it shall conform to IS : 581-1976¶.

4. TYPES AND DIMENSIONS

4.1 The stand-pipe shall be of two types: Type A with single outlet (*see* Fig. 1) and Type B with double outlet (*see* Fig. 1).

---

*Specification for leaded-tin-bronze ingots and castings (*revised*).

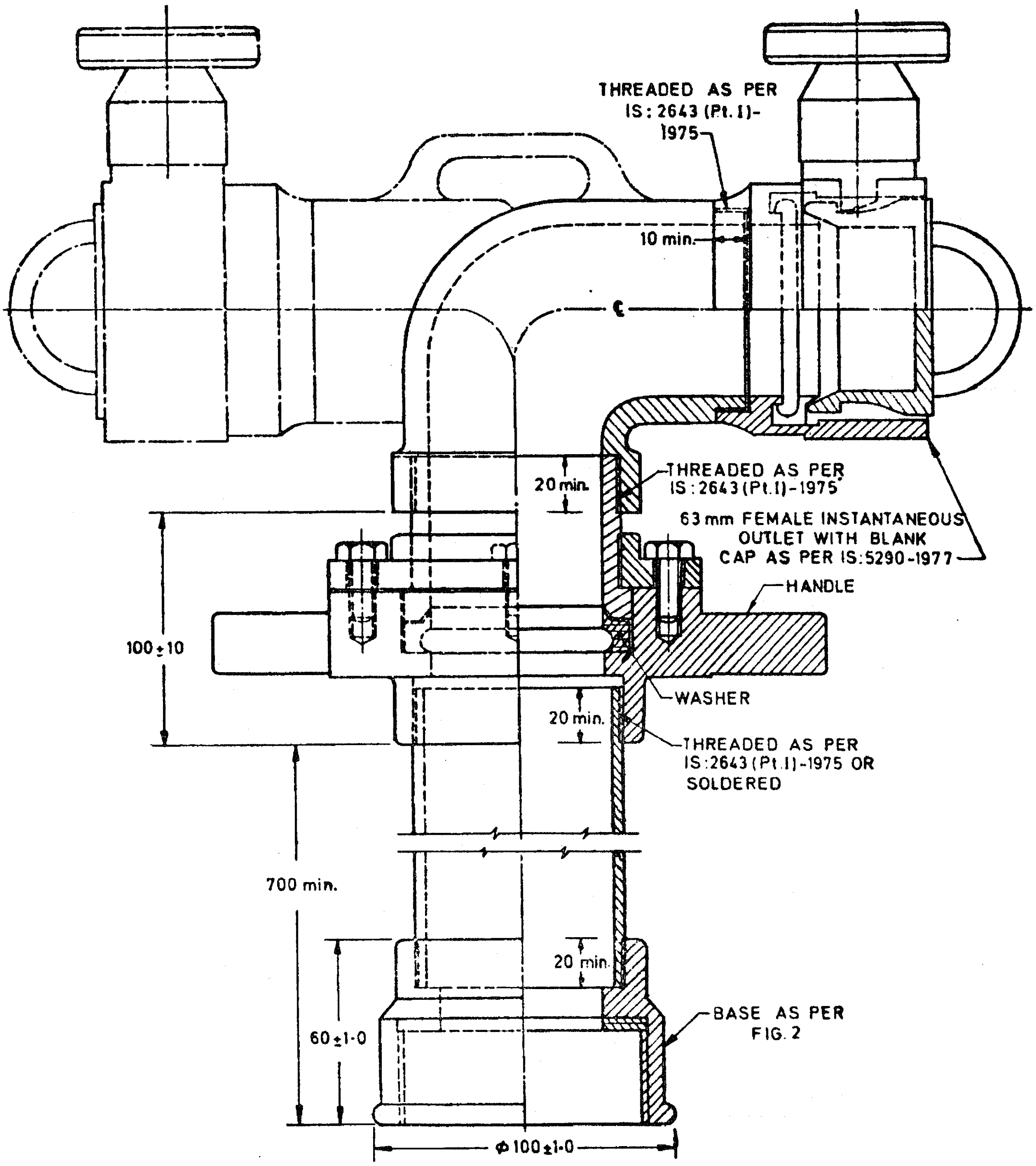
†Specification for aluminium and aluminium alloy ingots and castings for general engineering purposes (*second revision*).

‡Specification for mild steel tubes, tubulars and other wrought steel fittings: Part I Mild steel tubes (*fourth revision*).

§Specification for wrought aluminium and aluminium alloys, sheet and strip (for general engineering purposes) (*second revision*).

||Specification for rubber sealing rings for gas mains, water mains and sewers.

¶Specification for vegetable tanned hydraulic leather (*second revision*).


THREADED AS PER IS : 2643 (Pt. I)-1975
10 min.
℄
20 min.
THREADED AS PER IS : 2643 (Pt. I)-1975
63 mm FEMALE INSTANTANEOUS OUTLET WITH BLANK CAP AS PER IS : 5290-1977
HANDLE
100±10
WASHER
20 min.
THREADED AS PER IS : 2643 (Pt. I)-1975 OR SOLDERED
700 min.
20 min.
BASE AS PER FIG. 2
60±1·0
ϕ 100±1·0

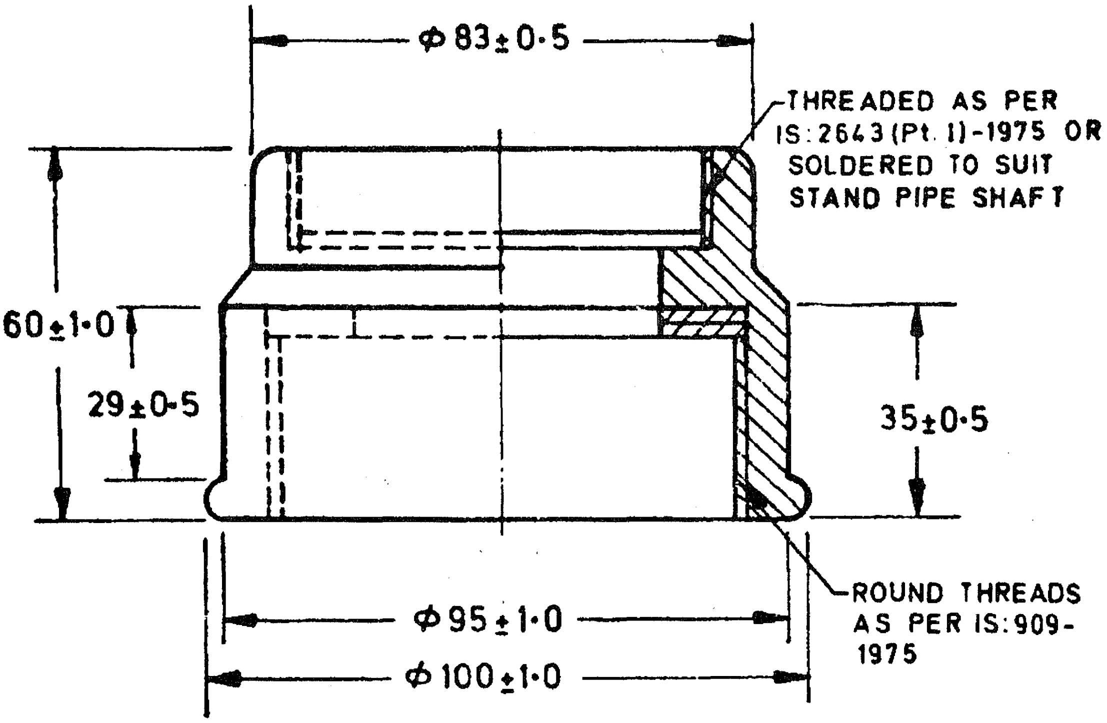
NOTE — I The outlet can also be at 30° from horizontal.
II The outlet can be single or double.
III Alternative to bolted joint screwed joint may be provided.

All dimensions in millimetres.

FIG. 1 TYPICAL STAND-PIPE WITH SWIVELLING SINGLE HEAD

As in the Original Standard, this Page is Intentionally Left Blank

4.2 The various dimensions of these types are given in Fig. 1 and 2. The tolerance shall conform to IS : 2102-1969* except for the dimensions mentioned in the standard.


ϕ 83±0·5
THREADED AS PER IS:2643(Pt 1)-1975 OR SOLDERED TO SUIT STAND PIPE SHAFT
60±1·0
29±0·5
35±0·5
ROUND THREADS AS PER IS:909-1975
ϕ 95±1·0
ϕ 100±1·0

All dimensions in millimetres.

FIG. 2 BASE OF STAND-PIPE

5. FINISH

5.1 All parts shall be of good finish, clear burrs and sharp edges. All castings shall be clean and sound, and free from plugging and welding or repair of any defects.

5.2 The head and stand-pipe shaft with fittings shall be painted fire-red of Shade No. 536 of IS : 5-1978†. The paint shall conform to IS : 2932-1974‡.

5.2.1 The head and stand-pipe shaft, if made of aluminium alloy (or pipe) may have a natural finish.

6. PERFORMANCE REQUIREMENTS

6.1 Hydrostatic Pressure Test — Each assembled unit shall be subjected to a hydrostatic pressure of 2·1 MN/m^2 (21 kgf/cm^2) with the blank caps in position for a period of 2·5 minutes for the purpose of locating porosity in the casting and leakage through all connections and outlets.

---

*Allowable deviations for dimensions without specified tolerances (*first revision*).

†Specification for colours for ready mixed paints and enamels (*third revision*).

‡Specification for enamel, synthetic, exterior (a) undercoating, (b) finishing (*first revision*).

7. MARKING

7.1 Each stand-pipe head and shaft shall clearly and permanently marked with the following information:

a) Manufacturer's name and trade-mark,
b) Year of manufacture, and
c) Type and angle of outlet.

7.1.1 The stand-pipe may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

(*Continued from page* 2)

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INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

QUANTITY	UNIT	SYMBOL	DEFINITION
Force	newton	N	1 N = 1 kg.m/s^2
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m^2
Frequency	hertz	Hz	1 Hz = 1 c/s (s^{-1})
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m^2

AMENDMENT NO. 1 FEBRUARY 2001
TO
IS 5714 : 1981 SPECIFICATION FOR HYDRANT STAND-PIPE FOR FIRE FIGHTING

(First Revision)

(*Page* 4, *clause* 2.1) — Insert following new matter after 'd)':

'e) Chain(s) Galvanized Steel'.

(*Page* 4, *clause* 3.6) — Insert the following matter:

Chain shall be of Galvanized steel wire conforming to IS 280.'

(*Page* 5, *Fig.* 1) — Insert the following footnote IV:

'iv) For double outlet stand pipe, handle size shall be 100 mm with a thickness of 5 mm.'

(*Page* 7, *clause* 4.3) — Insert new clause:

'Blank cap of ABS plastics shall be as given in Fig. 3.'

(*Page* 7, *clause* 6.2) — Insert new clause:

'**6.2 Flow Test** — Water shall be discharged through the assembly and its flow shall be measured using a flow meter or V-notch. The flow shall not be less than 900 litres per minute at 0.7 MN/m^2 (7 kgf/cm^2) from each outlet. It shall be a type test.'

(CED 22)

Reprography Unit, BIS, New Delhi, India